UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
NGO, NGUYEN HOANG

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/24/2008*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 14-19* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 14-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

This communication is in response to the RCE of 10/24/2008. All changes made

to the Claims have been entered. Accordingly, Claims 1-19 are currently pending in the

application.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

2.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating
        obviousness or nonobviousness.

3.   Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

ExtremeWare Software User Guide, by Extreme Networks, Inc, in view of Chow et al.

(US 7289428), hereinafter referred to as ExtremeWare and Chow.

Regarding claim 1, 2, 3, 4, 5, 10, 12, 13, 14, ExtremeWare Networks, Inc. discloses of

an ESRP (router protocol) that allows multiple switches to provide redundant routing

services to users (a failover transition system (redundant routing services) for a network

having a dual overlay ring topology with a core and plurality of ports (switches)

communicating over a VLAN, Chapter 10, Page 10-1 and figure 10-7 on 10-11).

ExtremeWare further discloses;

of one switch that actively provides <u>layer 2</u> switching for each VLAN and that the

switch performing the forwarding for a particular VLAN is considered the "master" for

that VLAN (a first switch having a master mode and a standby mode, said first switch

running only a layer 2 protocol and configured to provide switching between said ports

(forwarding), while in said master mode, 10-2);

of other participating switches for the VLAN are in standby mode (a second

switch having a master mode and a standby mode, said second switch running only a

layer 2 protocol and configured to providing switching between said ports while in said

master mode, wherein said second switch is in said standby mode when said first

switch is in said master mode, and said second switch is in said master mode when

said first switch is in said standby mode (relinquishes status, 10-2 and 10-4);

that if any of the configured tracking mechanisms fail, the master ESRP switch

relinquishes status as master and remains in standby mode for as long as the tracking

mechanism continues to fail (wherein said first switch is configured, upon a detection of

a network failure, to restart auto-negotiation of said ports, and to transition to said

standby mode; and wherein said second switch is configured, upon said detection of a

network failure, to transition to said master mode, 10-4).

that switches, being ESRP-aware, allow traffic within the VLAN to fail-over

quickly, as they will sense when a master/slave transition occurs and flush FDB entries

associated with the switches (wherein upon said configuration of said second switch to

transition to said master mode (transition), flushing a layer 2 forwarding database

(FDB), 10-17 – 10-18) and that each FDB entry consists of the MAC address of the

device (a layer 2 forwarding database, 7-1).

ExtremeWare however fails to specifically disclose the limitation of <u>rebroadcast

for a new path</u> once the ports flushes a layer 2 forwarding database. ExtremeWare

however discloses that Dynamic FDB (forwarding data base) entries associated with the

VLAN are flushed once the change is committed (6-14) and that entries in the database

are removed if, after a period of time, the device has not transmitted (7-2). Extremeware

further discloses that the switches allow traffic within the VLAN to fail-over quickly, as

they will sense when a master/slave transition occurs and flush FDB entries (upon said

configuration of sad second switch to transition to said master mode (master/slave

transition), 10-17 - 10-18). Thus it would have been obvious to a person skilled in the

art to have one of said ports flush a layer 2 forwarding database and <u>rebroadcasts for a

new path</u> if that specific switch has not transmitted for some time (standby mode) in

order to efficiently determining new paths in order to provide redundant routing services

to users in case of a network failure.

ExtremeWare further fails to specifically disclose a dual overlay ring topology

having a first loop along a first physical path and a second ring along a second physical

path, wherein said second physical path is substantially distinct from said first physical

path. ExtremeWare however discloses that ExtremeWare is a full-featured software

operating system that is designed to run on the Blackdiamond, Alpine, and Summit

families of Gigabit Ethernet switches (page 1-1) and further discloses that the Extreme

switch comprises a Gigabit fiber port (B-5) and that a multi-mode fiber or a single mode

fiber are used (B-6). Applicant further specifies of Multi-Mode Fiber to be a fiber-optic

cable with a large transmission core (page 25 lines 1-5 and page 8 lines 20-23 of

Specification), thus providing the motivation that ESUG suggests of having a fiber optic

network (as argued by applicant). In a similar field of endeavor, Chow discloses the

similar concept of a master and standby switch (primary and secondary) and further

discloses the topology of a communication system in which uses fiber routes (col2 lines

59-67). Chow further discloses a dual overlay ring topology having a first loop along a

first physical path and a second ring along a second physical path (as seen from figures

2 and 3), wherein said second physical path is substantially distinct from said first

physical path (working path and alternate (protection thus correlating to substantially

distinct) path, col5 lines 42-56). It should further be noted that figures 2 and 3 of Chow

may be correlated to figure 5 of the Applicant's disclosure and figure 1 of Chow may be

correlated to figure 6 of Applicant's disclosure. It would have thus been obvious to a

person skilled in the art to incorporate the concept of having the network topology and

its nodes as disclosed by Chow incorporate the ESRP of ExtremeWare in order to

efficiently and correctly provide redundancy in a network.

Regarding claim 2, 11, ExtremeWare discloses said VLAN is part of an Ethernet

network (Ethernet switches, 1-1).

Regarding claim 6, 7, 15, 16, ExtremeWare discloses said ports utilize ARP (switch

supports ARP, 11-5).

Regarding claim 8, 9, 17, and 18, ExtremeWare discloses said network failure is

detected using ping track (ESRP ping tracking, 10-4-10-5)/ port track (if no active ports

remain, the switch automatically relinquishes master status and remains in standby

mode, 10-4).

Regarding claim 19, ExtremeWare discloses a maximum of four switches participate in

providing redundant services to a single VLAN, and that one switch is the Master while

the other switches are in standby mode (10-2, 10-11).

Response to Arguments

1.   Applicant's arguments with respect to claims 1-19 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

2.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

3.   Grover et al. (US 6654379), Integrated Ring-Mesh Network.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to NGUYEN NGO whose telephone number is (571)272-

8398. The examiner can normally be reached on Monday-Friday 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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